REMARKS

In response to Examiner's rejections under 35 U.S.C. Section 102, we offer the following amendments and arguments.

Claim 1 has been amended to include a limitation directing the present invention to a film wherein the film has a specific, useful range of mechanical elongation.

Chacko 6,617,377 (herein referred to as Chacko '377) does not disclose a mechanically flexible material useful as a free-standing film. Chacko '377 is limited in its teachings regarding 'superior mechanical properties' to mechanical 'wear' (see col. 2 line 47). As such, Chacko '377 does not teach how to form a film having both superior mechanical elongation and relatively low electrical resistivity via the dispersion of a relatively small amount of carbon nanotube conductive filler in a polyimide base matrix.

In Chacko '377 (see col. 6, lines 25-35), the reference teaches how to form a 'layer' of material derived from a paste composition. The pastes of Chacko '377 are screen-printed onto separate support substrates. However, screen printing a paste and solution-casting a film, are distinctly different processes and these two processes form distinctly different materials having different mechanical properties. For instance, a composition in accordance with Chacko '377, after being screen-printed, cured, and then peeled from a support substrate, would not posses a mechanical elongation of between 50 and 100 percent. However, if a film were formed in accordance with the present invention, the film would possess an unexpectedly high degree of mechanical elongation not appreciated by the prior art. As such, the films of the present invention are not anticipated or inherently understood by Chacko '377.

Applicants discovered that a free-standing filled polyimide film, having relatively high mechanical elongation and relatively good electrical conductivity, could be formed via solution casting the mixtures disclosed onto a support, curing the mixture, and then mechanically orienting the film under heat in a tentering operation to achieve a relatively high mechanical elongation.

In response to Examiner's rejections under 35 U.S.C. Section 103, we offer the following arguments.

While Schlueter et. al. 6,201,945 (herein referred to as Schlueter '945) disclosed a film having a surface resistivity of between 1×10^4 to 1×10^{12}, Schlueter '945 failed to teach how to form a electrically conductive polyimide filled film, using a carbon nanotube filler, wherein

the film's mechanical elongation is between 50 and 100 percent. Since neither the materials of Schlueter '945 nor Chacko '377 inherently posses the benefits appreciated by the present application, the combination of these two references would not make the present invention obvious to one ordinarily skilled in the art.

In view of the foregoing, allowance of the above-referenced application is respectfully requested.

Respectfully submitted,

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